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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,795	12/07/2001	Matthew D. Brown	08887819US	7641

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EXAMINER	
AGHDAM, FRESHTEH N	
ART UNIT	**PAPER NUMBER**
2631	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/004,795	BROWN, MATTHEW D.	
	Examiner	Art Unit	
	Freshteh N. Aghdam	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11/30/05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 2,327,906, filed on 08/12/2000.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to illustrate "figure 9" as described in the specification at page 6, Lines 3 and 4. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 12, 14, 15, 16, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharpe et al (US 5,754,941).

As to claims 1 and 12, Sharpe et al teach a broad band fiber optic communication system that conveys telecommunication messages over a fiber optic link between a master site and one or more remote sites comprising generating a data sub-channel containing a supplemental data stream (i.e. header data registers); and attaching the data sub-channel to the digital payload data stream (i.e. ATM data payload) at an upstream site forming a phase modulated payload data stream (Fig. 2 and 6; Col. 4, Lines 26-41, 47-49, and 54-56).

As to claims 2 and 16, Sharpe et al teach recovering the phase modulated payload data stream (i.e. read clock signal 163); retiming the payload data stream using

the recovered clock signal (i.e. transmit clock 156); and extracting the supplemental data stream from the recovered phase modulated payload data stream (extracting the F1 byte from the STS-1 frame overhead) see (Fig. 6; Col. 5, Lines 31-38; Col. 10, Lines 19-31).

As to claims 4 and 14, Sharpe et al teach attaching the sub-channel to the digital payload data stream at an upstream site comprising retiming the payload data stream using the phase modulated clock signal forming a phase modulated payload data stream (Fig. 8, CAP-4 means; Col. 12, Lines 34-40; Col. 13, Lines 14-19).

As to claim 15, it is well known in the art to encode a signal prior to modulation in order to reduce the processing error.

As to claim 25, Sharpe et al teach a receiver for recovering a phase modulated payload data stream at a downstream site (i.e. clock signal 356); retiming the payload data stream using the recovered clock signal; and demodulating the supplemental data stream from the recovered phase modulated payload data stream (i.e. extracting the F1 signal from the STS-1 frame overhead) see (Fig. 8; Col. 12, Lines 24-32).

As to claim 26, it is well known in the art to decode a signal in order to reduce the processing error in a communication system.

Claims 8, 10, 19, 20, 29, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Kay et al (US 2004/0246891).

As to claims 8, 19, and 29, Kay et al teach a multi-modulation mode air interference frame format comprising phase modulating a data stream (overhead 402 and 502 contain a type of PSK modulation burst) and superimposing a supplemental

data stream onto the phase modulated payload data stream (Fig. 4 and 5; Pg. 9, Par. 108 and 109).

As to claims10 and 20, it is well known in the art to encode a signal in order to reduce the processing error in a communication system.

As to claim 30, it is well known in the art to encode a signal in order to reduce the processing error in a communication system.

Claims 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Bellamy (US 5,457,717).

As to claim 27, Bellamy teaches a desynchronizing circuit for receiving data within an optical communications network and transmitting a digital payload data stream (Fig. 1) having a clock signal comprising a clock and data recovery circuit having a PLL (Phase Locked Loop) circuit 29 for extracting the supplemental data stream (output clock); and adjust the timing of the payload data stream using the recovered clock signal.

As to claim 28, it is well known in the art to decode a signal in order to reduce the processing error in a communication system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe et al, and further in view of Bellamy.

As to claim 2, Sharper et al teach all the subject matters as recited in claim 1, except for recovering the phase modulated payload data stream; retiming the payload data stream using the recovered clock signal; and extracting the supplemental data stream from the recovered phase modulated payload data stream. Bellamy, in the same field of endeavor, teaches recovering the modulated payload data stream (payload data 16); retiming the payload data stream using the recovered clock signal (i.e. the output clock outputted from PLL 29); and extracting the supplemental data stream from the recovered modulated payload data stream (output clock from PLL 29) see (Fig. 1; Col. 3, Lines 2-12; Col. 4, Lines 39-45). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Bellamy with Sharpe et al in order to accommodate phase adjustments on a gradual basis (Col.4, Lines 42 and 43).

As to claim 5, Sharpe et al teach all the subject matters claimed above except for extracting the supplemental data stream using a clock and data recover circuit having a phase locking oscillation circuit; and retimig the payload data stream using the recovered clock signal. Bellamy teaches a desynchronizing circuit for receiving data within an optical communications network and transmitting a digital payload data stream (Fig. 1) having a clock signal comprising a clock and data recovery circuit having a PLL (Phase Locked Loop) circuit 29 for extracting the supplemental data stream (output clock); and adjust the timing of the payload data stream using the recovered clock signal. Therefore, it would have been obvious to one of ordinary skill in the art to

combine the teaching of Belllamy with Sharpe et al in order to generate an output clock signal for transmitting the payload data without an mapping jitter caused by timing adjustment (Abstract).

As to claim 7, it is well known in the art to encode and decode a signal in the transmission and reception process in order to reduce the processing error in a communication system.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay et al, further in view of Sharpe et and Bellamy.

As to claim 9, Kay et al teach all the subject matters claimed above, except for modulating the phase of a payload data stream; and superimposing a supplemental data stream from the recovered phase modulated payload data stream. Bellamy teaches means for recovering the payload data stream by (de-mapper 12); and means for extracting the supplemental data stream from the recovered payload data stream (output clock from PLL 29) see (Fig. 1; Col. 3, Lines 2-12; Col. 4, Lines 39-45). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Bellamy with Kay et al in order to reduce the jitter caused by timing adjustmanet (Abstract).

As to claim 11, it is well known in the art to decode a signal in the reception side in order to reduce the processing error.

Claims 16, 17, 18, 21, 22, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellamy, and further in view of Sharpe et al.

As to claims 2, 16, 21, and 31, Bellamy teaches means for recovering the payload data stream by (de-mapper 12); means for retiming the payload data stream using the recovered clock signal by (output clock from PLL 29); and means for extracting the supplemental data stream from the recovered payload data stream (output clock from PLL 29) see (Fig. 1; Col. 3, Lines 2-12; Col. 4, Lines 39-45). Bellamy is silent about phase modulating the transmitted and received signal. Sharpe et al, in the same field of endeavor, teach phase modulating the signal prior to transmission (Col. 4, Lines 54-56). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Sharpe et al with Bellamy in order to transmit the data to the reception side (Col. 4, Lines 55 and 56).

As to claim 17, Bellamy teaches a desynchronizing circuit for receiving data within an optical communications network and transmitting a digital payload data stream (Fig. 1) having a clock signal comprising a clock and data recovery circuit having a PLL (Phase Locked Loop) circuit 29 for extracting the supplemental data stream (output clock); and adjust the timing of the payload data stream using the recovered clock signal.

As to claims 18 and 22, it is well known in the art to decode a signal in order to reduce processing error.

Claims 3, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe et al, and further in view of Kay et al.

As to claims 3 and 13, Sharpe et al teach all the subject matters claimed above, except for driving the phase of a phase modulator using the supplemental data stream

to form a phase modulated sub-channel; and phase-modulating the clock signal contained in the payload data stream using the phase modulator. Kay et al teach a phase modulator driven by the supplemental data stream (402 or 502) for phase modulating the payload data stream contained in data stream (500) whereby a phase modulated sub-channel is generated (402 or 502) see (Fig. 4 and 5; Pg. 9, Par. 108 and 109). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Kay et al with Sharpe et al for system management and dynamic bandwidth allocation purposes (Pg. 9, Par. 108).

As to claim 6, it is well known in the art to encode and decode a signal in the transmission and reception process in order to reduce the processing error in a communication system.

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kay et al, and further in view of Bellamy.

As to claim 23, Kay et al teach a phase modulator driven by the supplemental data stream (402 or 502) for phase modulating the payload data stream contained in data stream (500) whereby a phase modulated sub-channel is generated (402 or 502) see (Fig. 4 and 5; Pg. 9, Par. 108 and 109). Kay et al is silent about a data retime circuit for retiming the payload data stream using the phase modulated clock signal so as to form a phase modulated payload data stream. Bellamy, in the same field of endeavor, teaches a data retime circuit for retiming the payload data stream using the clock signal (output clock outputted from PLL 29) so as to form a payload output signal see (Fig. 1; Col. 3, Lines 2-12; Col. 4, Lines 39-45). Therefore, it would have been obvious to one of

ordinary skill in the art to combine the teaching of Bellamy with Kay et al in order to reduce jitter caused by timing adjustment (Abstract).

As to claim 24, it is well known in the art to encode a signal prior to modulating in order to reduce the processing error.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Freshteh Aghdam

April 26, 2005

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